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(54) Drainage Traps

(57) A drainage trap for a shower tray 1 comprises a body 4 having (a) a lateral outlet 9; (b) an upwardly-removable dip tube 12e bonded to the underside of a perforated inlet cover plate 13; and (c) an upwardly-removable sediment tray 15.

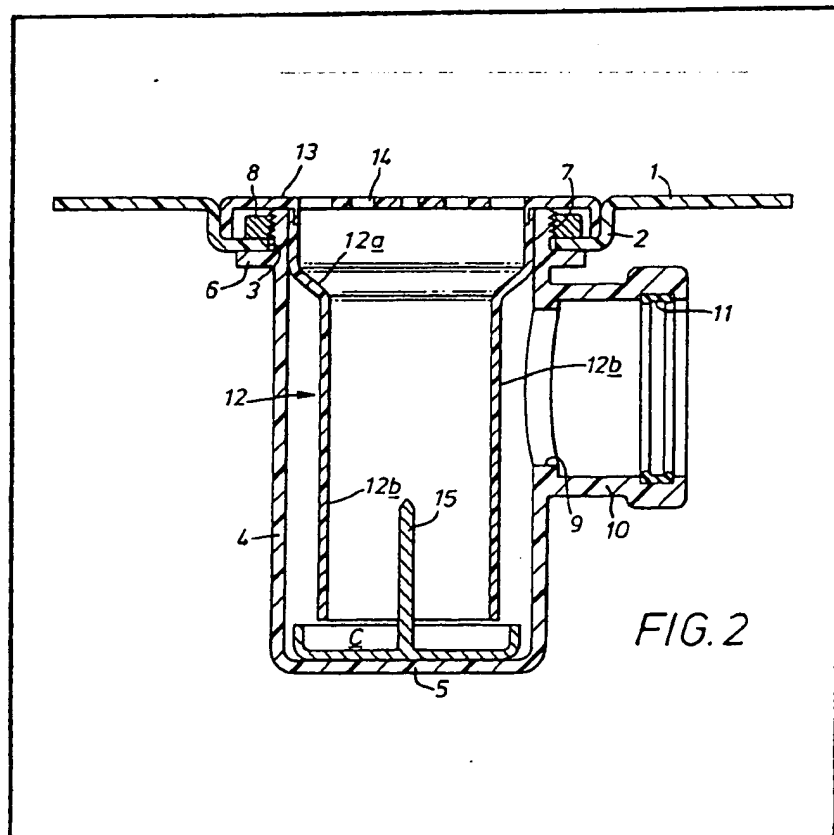


FIG. 2

The drawings originally filed were informal and the print here reproduced is taken from a later filed formal copy.

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SPECIFICATION

Waste Water Outlets

This invention relates to waste water outlets, and in particular to outlets where access from below the outlet is restricted. For example, in the case of a shower floor or tray rarely is there sufficient space between the underside of the tray and the underlying structure for one to get at the outlet to free it of a blockage.

- It is an object of this invention to provide an outlet fitting which provides access from above so that one can readily and conveniently remove blocking solids. It is a further object of this invention to provide such a fitting in which the tendency for solids to build up into a blockage is reduced.

- According to a first feature of the invention, a waste water outlet comprises a floor portion which in use is substantially horizontal, an outlet aperture being present in the floor, a short passageway located below the aperture and disposed substantially vertically the passageway having an end wall extending generally parallel to the floor, a lateral opening being present in the passageway side wall for egress of water out of the passageway, the passageway containing a releasable trap dimensioned and arranged to prevent solid matter contained in water passed into the outlet from the floor and exiting via the lateral opening from reaching the lateral opening.

- By the use of the outlet as just defined, the solid matter will tend to accumulate in a location where it will not interrupt the flow of water, and because the trap is releasable, access may be gained to the accumulated solids from above the floor to remove them.

- According to a second feature of the invention, a waste water outlet comprises a floor portion which in use is substantially horizontal, an outlet aperture being present in the floor, a short passageway located below the aperture, the passageway being substantially vertical and having an end wall extending generally parallel to the floor, a lateral opening being present in the passageway vertical side wall for egress of water out of the passageway, the passageway containing a trap for solid matter contained in water passed through the outlet, the trap extending vertically in the passageway and extending to a position below the level of the lateral outlet but above the end wall whereby water entering the outlet is directed down through the trap and any solids tend to accumulate in the space between the bottom of the trap and the end wall and are so prevented from entering the lateral opening.

Preferably the passageway is arranged to be releasably connected to the floor.

- According to a third feature of the invention, a waste water outlet comprises a floor portion which in use is substantially horizontal, an outlet aperture being present in the floor, a short passageway located below the aperture and extending substantially vertically, means for

- releasably connecting the floor and the passageway, the passageway having an end wall extending generally parallel to the floor, a lateral opening being present in the passageway vertical side wall for egress of water out of the passageway, the passageway containing a trap for solid matter contained in water passed through the outlet, the trap being engaged with the underside of a cover on the outlet and having a reticular wall portion and extending vertically in the passageway and extending to a position below the level of the lateral outlet but above the end wall whereby water entering the outlet is directed down through the trap and any solids tend to accumulate in the space between the bottom of the trap and the end wall and are so prevented from entering the lateral opening.

The floor portion may be the bottom of a shower unit, a bath, a sink or hand basin.

- As a much preferred feature the outlet is set below the level of the floor portion and a cover is present to sit level in the floor, the cover having holes to allow water into the outlet and being engageable with the funnel-shaped end portion of the trap.

- The invention includes for use in the outlet, a trap comprising a tubular body having one funnel-shaped end portion and having a reticular body portion. The invention further includes an assembly of a trap and a cover, the funnel-shaped end portion of the trap being engaged with the cover, the cover having holes to allow water therethrough.

- In order that the invention may be better understood it will now be described by way of example with reference to the accompanying diagrammatic drawings in which

- Figure 1 is a partial plan view of a shower floor tray including an outlet, and

- Figure 2 is a vertical sectional view of the tray of Figure 1.

- The tray 1 is vacuum formed of a synthetic resin material. A ledge 2 is depressed in the tray 1 and has an annular opening 3. A passageway 4 moulded of synthetic resin has a lower end wall 5 and adjacent its upper end the passageway 4 has an annular exterior flange 6. The portion of the passageway 4 beyond the flange 6 is screw-threaded as at 7. As shown the passageway 4 is held against the ledge 2 by abutment of the flange 6 against the underside of the ledge 2, and a nut 8 is screw threaded on the threaded portion 7 to engage the passageway 4 and the ledge 2. A sealing grommet may be present. A lateral opening 9 is formed in one side of the passageway 4, and a branch passageway 10 extends from the opening 9. As shown the branch 10 has a seal 11 and may be joined on to other pipework, not shown.

- A trap 12 is disposed with the passageway 4. The trap has an upper funnel portion 12a and a lower tubular portion 12b. The trap is formed of a synthetic resin and is dimensioned to stop a short distance above the end wall 5 of the passageway 4 leaving a clearance C in between. At its upper

end the trap 12 is bonded to a cover 13 which fits over the top of the passageway 4 and flush with the tray 1. The cover 13 has holes 14. A collection plate 15 is located on the floor 5 and extends into the lower tubular portion 12b.

In use, waste water enters the outlet via the holes 15 in the cover 13. The water is funnelled by the funnel 12a into the passageway 4 and is directed towards the end wall 5. Any solids likely to form a gunge are thus directed to be deposited in the clearance C. Because the lower end of the trap 12 is below the opening 9, the solids cannot readily exit from the outlet. When the gunge has grown too big, the cover 13 may be removed from above and the trap 12 is lifted away with it, so exposing the gunge on the plate 15 which can be taken away from above without the need to gain access to below the tray.

Claims

- 20 1. A waste water outlet comprising a floor portion which in use is substantially horizontal, an outlet aperture being present in the floor, a short passageway connected to the floor and located below the aperture and being disposed
- 25 substantially vertically, the passageway having an end wall extending generally parallel to the floor, a lateral opening being present in the passageway sidewall for egress of water out of the passageway, the passageway containing a trap
- 30 dimensioned and arranged to prevent solid matter contained in water passed into the outlet from the floor and exiting via the lateral opening from reaching the lateral opening and being removable from the passageway via the outlet aperture.
- 35 2. A waste water outlet according to Claim 1, in which the releasable trap comprises a tubular body suspended in the passageway from

the outlet aperture and extending past the lateral opening towards but stopping short of the end wall, whereby water containing solid matter is directed through the trap and up towards the lateral opening and solid matter is arranged to be deposited in the gap between the end of the trap and the passageway end wall.

45 3. A waste water outlet according to Claim 2, in which a collection plate for solid matter is present on the passageway and wall and is removable from the passageway via the outlet aperture following removal of the trap.

50 4. A waste water outlet according to Claims 1 and 2, wherein the passageway is releasably connected to the floor.

55 5. A waste water outlet according to any preceding claim, wherein the outlet is set below the level of the floor portion and a cover is present to sit level in the floor, the cover having a plurality of holes to allow water into the outlet.

60 6. A waste water outlet according to Claim 5, wherein the cover is engaged with a funnel-shaped upper end portion of the trap.

7. A waste water outlet according to any preceding claim, wherein the floor portion is the bottom of a shower unit, a bath, a sink or hand basin.

65 8. A waste water outlet according to any preceding claim, which has been vacuum formed of a plastics material.

70 9. A trap for use in a waste water outlet comprising a tubular body having one funnel-shaped end portion and having a reticular body portion.

10. An assembly of a trap and a cover, the funnel-shaped end portion of the trap being engaged with the cover, and the cover having

75 holes to allow water therethrough.